



# Centrally Managed DC Ultra-Rapid Charging

## Technology Overview

Access to electric vehicle (EV) charging infrastructure is generally limited at federal facilities, and achieving widespread fleet electrification will necessitate a substantial investment. GSA has estimated that the federal government may need more than 100,000 charging ports—one charging port for every two electric vehicles acquired.<sup>1</sup>

The current high-power DC charging options, such as power packs, come with a hefty price tag. Expanding power capacity means adding more packs, leading to increased expenses and space requirements for each charging station. This limits their flexibility and complicates expansion efforts.

In contrast, the centrally managed DC ultra-rapid charging technology separates charging stations from the power source. This separation enables more efficient power management and cost reduction through simultaneous or sequential charging. The technology supports high-output simultaneous direct current charging (up to 300 kW output per station) and distributes power according to vehicle request. Compared to stations with integrated power sources, it reduces infrastructure costs by using thinner copper cabling and a single power source for four stations and requires only ¼ of the charging footprint.

## Why is GSA Interested?

As the General Services Administration (GSA) incorporates more electric vehicles (EVs) into its fleet, it becomes crucial to have dependable and smart infrastructure and charging capabilities. Centrally managed DC ultra-rapid charging can reduce infrastructure costs and provide a smaller charging footprint compared to conventional stations with integrated power sources.

## Deployment Potential

The centrally managed DC ultra-rapid charging technology is applicable across the GSA portfolio.

<sup>1</sup>U.S. Government Accountability Office, Federal Vehicle Fleets: Observations on the Transition to Electric Vehicles (GAO-23-105635), <https://www.gao.gov/products/gao-23-105635>, accessed 06-2023.

*Green Proving Ground (GPG), in collaboration with the U.S. Department of Energy, is evaluating the real-world performance of fleet charging management in federally owned buildings within GSA's inventory. The technology will be provided by Loop Global and coordinated with other ongoing evaluations of this technology.*